

ABSTRACT OF THE DISCLOSURE

An electrochemical printing system (100, 200) and method are disclosed having a printer head (130, 230) that expels a small jet of electrolyte (112) towards a conductive substrate (92) to facilitate electrodeposition or removal of material from the substrate. In 5 an embodiment of the invention the printer head includes a plurality of individually addressable electrodes (220), each electrode having a channel therethrough and wherein the electrodes are much larger than the electrolyte jet outlet. The printer head includes means for inhibiting cross talk between electrodes. For example, the printer head may include a plenum (241) and a nonconductive cross-talk inhibition layer (245) upstream of 10 the electrodes. A resolution defining layer (270) having small apertures (271) is provided at the distal end of the printer head.